

**CALIFORNIA INSTITUTE OF TECHNOLOGY
JET PROPULSION LABORATORY
SPECIAL CONDITIONS - FIXED-PRICE CONSTRUCTION CONTRACT
FOR PERFORMANCE AT THE JPL TABLE MOUNTAIN FACILITY**

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SC-1. SECURITY AND SAFETY

- (a) General. The following regulations and procedures are for the protection and information of the Contractor, subcontractors and their employees performing construction work for JPL, and it is mandatory that the procedures and regulations be followed.
- (b) Union Representatives. All Contractors and subcontractors working at the facility who are visited by labor or union representatives are reminded that such persons shall be directed to the JPL Site Manager, who will ascertain the purpose of the visit, the name of the individual, union represented, whom he/she wishes to see, and the location where the work is being performed. The Site Manager will, in turn, advise the Designated JPL Project Technical Representative. A JPL escort for the union representative will be provided during the period of the visit, and access will be confined to that area necessary to service union members of the particular contractor stated in the visitation request.
- (c) "Off-Limits" Areas. All buildings and work areas other than those specifically assigned to the Contractor shall be considered "off-limits" to all Contractor personnel.
- (d) Fire Protection.
- (1) In case of fire at a Contractor's facility, the Contractor shall immediately call the Site Manager's office (dial 249-3650 or 3551 from commercial telephones, or Extension 21 if on site). If no answer is received, the Contractor shall call the Big Pines Ranger Office (dial 3504).
 - (2) The Contractor shall clean the site daily of all combustible materials.
 - (3) It shall be the responsibility of the Contractor to provide adequate equipment and supplies for protection against fire during the construction period.
 - (4) Smoking shall be permitted only in accordance with U.S. Forest Service Regulations in any area under their jurisdiction.
 - (5) All diesel or gasoline engines, and all flues used in the Contractor's operations, shall be equipped with spark arresters which meet Forest Service standards.
 - (6) The Contractor shall cooperate with the District Ranger in preparation of a fire plan by furnishing necessary information on manpower, equipment, and organization necessary to implement these Special Conditions in providing the necessary fire prevention and control.
 - (7) Contractors and subcontractors who in the performance of their contracts have a need for welding, cutting torch operation, tar kettle operation, or burning of any type, shall, prior to starting the operation, notify JPL of the time and place, and shall provide a constant "Fire Watch."
- (A) The "Fire Watch" shall consist of one reliable, trained Contractor's employee who is thoroughly capable in the control and extinguishing of fires, at each location.
- (B) The "Fire Watch" person shall be armed with a 2½ -gallon soda-acid fire extinguisher with a UL rating of 2A.

(C) No tar kettle may be operated unless it has an operational heat indicator or gauge. The tar kettle must be placed at a safe distance from a hazardous area or other combustible materials.

(e) First Aid. The Contractor shall furnish and maintain adequate first aid facilities and procedures for construction personnel.

(f) Vehicles.

- (1) Parking. Contractor's and workers' vehicles must be parked only in areas designated by JPL. All other areas and roadways must be kept clear at all times for normal operations.
- (2) Wheel Blocks for Vehicles. All Contractor vehicles except passenger cars and station wagons shall be provided with wheel blocks to prevent unattended vehicles from rolling. It shall be the Contractor's responsibility to instruct all of its employees and subcontractors of this requirement.
- (3) Mechanical Equipment Back-Up Alarms. Haulage equipment, including trucks with body capacities of 2½ cubic yards, or more, used to haul dirt, rock, concrete, or other construction material, and self-propelled construction equipment such as graders, which are operated on the project, whether moving alone or in combination, shall be equipped with an independent signal alarm which will sound automatically when the equipment moves in reverse. The alarm may be continuous or intermittent and shall be audible for a distance of 200 feet, irrespective of the conditions and circumstances under which the equipment is being operated. Alarms will operate upon initial backward movement, and if intermittent, shall sound at intervals not to exceed three seconds during the entire period the equipment is traveling in reverse. Compliance with these provisions by subcontractors shall be the responsibility of the Contractor.

SC-2. NIGHT OPERATIONS

Unless otherwise provided in the Contract, no jobsite work shall be performed during night hours without prior notification to JPL, which notification shall be not less than 24 hours, for Monday through Friday. Normal Table Mountain Facility duty hours are 7:30 a.m. to 4:00 p.m.

SC-3. AS-BUILT DRAWINGS

The Contractor shall, within 15 days after completion of construction, provide JPL with one set of marked-up prints showing clearly and neatly in red ink all changes, corrections, and additions made during the construction period. Such features shall be recorded and kept up to date on a complete as-built record set of drawings which shall be corrected daily and show every change from the Contract drawings and specifications and the exact as-built location, size, and kind of every valve, fixture, wire conduit, etc. JPL will supply one set of prints to be maintained continuously on the site by the Contractor. The set of record as-built information shall be subject to inspection by JPL at any time.

SC-4. SHOP DRAWINGS, EQUIPMENT LISTS, AND MATERIAL SAMPLES

(a) General.

- (1) The Contractor shall submit to JPL, or such person or firm as directed by JPL, for approval, all shop drawings, equipment lists, and material samples required under the various headings of the technical specifications. Drawings and lists shall be complete and shall contain all required detailed information. When approved by JPL, each copy of the drawings or lists will be identified as having received such approval by being so stamped and dated. The Contractor shall make any corrections required by JPL. Unless otherwise specified in the specifications, the number of copies to be submitted shall be as stated herein. Each shop drawing, equipment list, and material sample shall be identified with the following information, as applicable:

Contract Number
Project Location
Subcontractor's Name
Manufacturer's Name
Specification Paragraph
Drawing Series Number

- (2) JPL approval of such submittals shall not be construed as a complete check but will indicate only that the general method of construction and detailing is satisfactory. Approval of such submittals shall not relieve the Contractor of the responsibility for any error or omission which may exist. The Contractor shall be responsible for the dimensions and design of adequate connections, details, and satisfactory construction of all work.

(b) Shop Drawings. Six copies of all shop drawings shall be submitted. Four sets of these shop drawings will be retained by JPL, and two sets will be returned to the Contractor. Shop drawings for submittal shall be either blue-line or black-line print on white background. Blueprints are not acceptable. Shop drawings include fabrication/erection/installation drawings.

- (c) Equipment Lists. Four copies of equipment lists shall be submitted within 10 days after receipt of written Notice to Proceed. With the four copies of the equipment lists, the Contractor shall submit two sets of the brochures and technical data for each piece of equipment to be supplied. Brochures and technical data shall include catalogs, operating instructions, cuts, diagrams and such other descriptive data as will give a complete description of the equipment, including manufacturer's name, trade name, model number, type, size, rating and auxiliary equipment.
- (d) Material Samples. Samples shall be submitted in the quantities delineated in the technical specifications, in a timely manner, for JPL approval.
- (e) Proofs of Compliance. Submit proofs of compliance by providing certification that all material and equipment proposed for use in the project meet or exceed the specifications.

SC-5. OPERATION AND MAINTENANCE MANUALS

- (a) Bound Manuals. Within 10 calendar days prior to completion of construction, the Contractor shall provide five complete sets of Operation and Maintenance Manuals. Each set shall be permanently bound and shall have a hard cover. The following identification shall be inscribed on the covers: the words "OPERATION AND MAINTENANCE MANUALS," the title, number, and site location of the building, the name of the Contractor, and the Contract number. The sheets in the manual shall be approximately 8½ x 11 inches, with large sheets of drawings folded in. Each complete bound manual shall be organized to provide the following:
 - (1) Table of Contents
 - (2) A page indicating Contractor's name, address, telephone number, and the name of the person to be contacted regarding building and equipment maintenance.
 - (3) Dividers with tab indices indicating the various sections, such as:
 - (A) Heating, ventilating, and air conditioning equipment.
 - (B) Plumbing equipment.
 - (C) Electrical equipment.
 - (D) Special equipment.
 - (4) A sheet at the front of each section, indicating the appropriate Contractor/subcontractor name, address, telephone number and name of the person to be contacted at the office of the installer and the major suppliers under the Contract.
 - (5) An index listing of quantities and materials at each major sub-section tab divider.
- (b) Manual Requirements. The manual shall describe each system installed and shall be in sufficient detail to permit JPL operating personnel to understand, operate, and maintain all equipment. The manual shall include compilations of instruction manuals furnished by the equipment manufacturers. These instruction manuals shall include complete operation, maintenance, inspection, and repair instructions for each and every item of equipment specified under various headings of the specifications. Each complete manual shall contain the following information:
 - (1) Catalog data for each piece of equipment.
 - (2) Operating and maintenance instructions (including lubrication) for each piece of equipment.
 - (3) Manufacturer's bulletins, cuts, and descriptive data.
 - (4) Complete nameplate data.
 - (5) List of all belt and sheave sizes.
 - (6) Performance data (curves, charts, etc.) on all pumps, air handling equipment, and motor ratings and electrical signal lines and wiring diagrams for motor control centers, and major power circuit breaker and disconnect centers.
 - (7) Complete "as-built" air conditioning controls diagram and written operating procedure with catalog literature describing each control instrument.
 - (8) Complete and detailed "as-measured" balance log for the air conditioning system identified by the company doing the balance work, its address and telephone number, and the signature of the air balance engineer who performed the work.

(9) Spare parts data for each piece of equipment containing the following information:

(A) Recommended quantity of parts required for one year of operation.

(B) Complete parts lists of all replaceable items.

(C) Drawing number and shop drawings.

(D) Part equipment code number.

(E) Unit price of each item.

(F) Name, address, and phone number of supplier.

(G) Such remarks and data as the manufacturer may consider pertinent.

(c) Framed Instructions. Approved wiring and control diagrams, and valve charts, framed under glass, shall be posted in locations designated by JPL. Proposed diagrams, instructions, and other sheets shall be submitted for approval prior to posting.

SC-6. ADDITIONAL WARRANTIES/GUARANTEES

"Guarantees" delineated in the project specifications are supplemental to the applicable General Provision entitled "Warranty" or "Warranty of Construction." Such "Guarantees" shall be in writing and shall be submitted to JPL by the Contractor within 15 days after completion of construction.

SC-7. SAFETY AND HEALTH/HAZARDOUS MATERIALS

(a) This specification supplements and implements the provisions of the General Provision of this Contract entitled "Safety and Health."

(b) The safety and health plan required to be submitted by the Contractor pursuant to paragraph (a) of the aforesaid General Provision shall implement the requirements of the General Provision and of the standards and specifications of paragraph (c) hereof and shall describe the means to be employed by the Contractor to monitor and enforce said requirements. The plan shall also include the Contractor's standards and criteria for imposing safety and health standards upon its subcontractors of any tier and its plans and procedures for monitoring compliance with such standards. A safety and health plan for similar work performed by the Contractor on a federal contract may be submitted for review and approval under this Contract.

(c) The following safety and health standards, specifications, issuances, and reporting requirements are prescribed pursuant to paragraph (c) of the General Provision of this Contract entitled "Safety and Health."

(1) General Standards and Specifications. The Contractor shall comply with applicable provisions of the Occupational Safety and Health Standards of the Occupational Safety and Health Act of 1970, Rules and Regulations of the Department of Labor issued pursuant thereto and regulations of states provided for under the Act which are in effect on the date of this Contract.

(2) Environmental Matters. Environmental controls shall be in accordance with applicable NASA and other Federal, State and local regulatory requirements and in accordance with applicable Executive Orders of the President. In addition, the following environmental controls shall apply to asbestos abatement or asbestos work:

(A) Asbestos Work Experience Documentation. The Contractor or specialty subcontractor for performance of any asbestos abatement work shall be registered as an asbestos abatement Contractor with the California Division of Occupational Safety and Health. The Contractor/subcontractor shall submit documentation as required by JPL to prove the following:

(i) Minimum of one year experience as a contractor in this specialized field.

(ii) Successful completion of a minimum of three asbestos abatement projects of similar size and scope or larger. This data shall include the following:

a. Name of contracting agency or firm.

b. Location of work site.

c. Name of Contracting Representative.

d. Description of work.

e. Results of air monitoring before, during and after work.

(iii) A record of any citations issued by federal, state, or local regulatory agencies relating to asbestos abatement activity, including projects, dates, and resolutions.

(iv) Situations in which an asbestos-related contract has been terminated, including projects, dates and reasons for terminations.

(v) A listing of any asbestos-related legal proceedings/claims in which the Contractor or any employee has participated or is currently involved in, including descriptions of role, issue, and resolution to date.

(B) Worker Qualifications. Contractor and subcontractors shall at all times enforce strict discipline and good order among their employees and shall not employ any unfit person or anyone not skilled in work assigned to such person.

(i) Worker Training and Medical Qualifications. All asbestos workers shall be trained and medically certified in accordance with the requirements of General Industry Safety Order 5208.

(ii) Worker Qualification Form. Contractor shall be prepared to provide to JPL at least 72 hours prior to beginning of work a list of all qualified asbestos workers to be employed in actual asbestos removal/asbestos work and for each such asbestos worker the Contractor shall have completed form JPL 2887, "Worker Qualification," an attached copy of which forms part of these Contract documents.

(d) Illness, Incident, and Injury Experience Reports.

(1) Reports required by this specification, or the Safety and Health General Provision of this Contract, shall be furnished in three copies.

(2) The Contractor shall furnish such other reports as JPL determines to be related to the Contractor's Safety and Health Program and its experience thereunder arising out of work performed under this Contract.

(e) Hazardous Materials.

(1) General.

(A) The California Chemical Hazard Communication Regulation is designed to ensure that hazardous substances produced by manufacturers are evaluated and the information concerning these hazards is transmitted to all affected employers and employees.

(B) Presented in Section 5194 (e)(1)(c) of the Hazard Communication Standard are specific requirements related to contractor employees. Contractor personnel must be informed by a JPL representative of hazardous substances to which their employees may be exposed while performing their work at JPL and the appropriate protective measures. Contractors are also required to provide a list of chemicals being used on the job site and the complete Material Safety Data Sheet (MSDS) for each chemical. The safe storage, use, application, and complete removal of the products shall be the responsibility of the Contractor.

(C) Prior to a contractor performing work at JPL, a pre-construction safety meeting is required to discuss all aspects of safety. The Facilities Section personnel are responsible for scheduling and providing written notification to the Occupational Safety Office prior to the initiation of Contractor activities. A representative of the Safety Office will be responsible for addressing specific safety-related concerns.

(2) JPL will inform the Contractor of:

(A) Applicable regulatory requirements which the Contractor will be required to follow while performing work.

(B) Any hazardous agents that the Contractor and their employees may be exposed to while working at specific job sites at JPL.

(C) Specific JPL rules, regulations, policies, and procedures which must be complied with while working at JPL.

(3) Contractors are:

(A) Responsible for providing protective equipment which will be required during the operation.

(B) Required to submit a list of all chemicals and complete MSDSs for all products used during the course of work at JPL. The safe storage, use, application, and removal of the products shall be the responsibility of the Contractor. If special storage is required, notification to the Safety Office prior to delivery of the material to the job site is required.

- (C) Responsible for discussing Safety and Health Special Conditions and General Provisions with all employees performing work at JPL.
 - (D) Contractor shall immediately notify and promptly report to JPL any accident or incident or exposure resulting in fatality, disabling occupational injury or occupational disease, any chemical release or potential release which threatens or impacts human health or the environment.
- (4) Contractor acknowledges receipt of the attached Asbestos Notification, form JPL 2895, identifying JPL buildings containing asbestos and agrees to distribute the Notice to all its employees prior to their commencing work in such buildings. Contractor agrees to coordinate with the JPL Occupational Safety Office for special asbestos handling instructions to be given to all Contractor's employees prior to their commencing work, if any, which could disturb asbestos in JPL-controlled buildings.